

The Bureau of Reclamation and its Archeology

A Brief History

The Bureau of Reclamation is the nation's largest water wholesaler and second largest producer of hydroelectric energy in the United States. Today's agency is a far cry from the one created at the turn of the 20th century with the goal of "reclaiming" the arid lands of the West and providing homesteads for western settlement. The many changes that the agency has undergone in the past 90 years has assured that Reclamation will play an important role as the West enters the next millennium.

The Bureau of Reclamation was created in 1902 as the United States Reclamation Service, a division of the United States Geological Survey. Creation of the Reclamation Service was the culmination of a decades long effort to "reclaim" arid lands of the western United States through development of irrigated agriculture. In the years prior to passage of the Federal Reclamation Act of 1902, Congress passed several laws promoting settlement of the West through disposal of public lands and development of irrigation. These efforts proved to be unsatisfactory.

The barriers to western settlement were unlike those which faced the first settlers in the East. Throughout much of the eastern U.S., water was abundant and available year-round. But in the West, rivers which ran full and fast each spring often dwindled to near-nothing in the late summer and fall. Much of the region's precipitation came during winter months when it was of no use to irrigators. The solution to this problem was development of storage reservoirs and works to capture winter rains and spring floods for later release. The cost of developing such storage was high, and few private enterprises could afford such developments.

During the 1890s, demand for federal irrigation development in the West grew. Led by Nevada Representative Francis Newlands, publisher William Ellsworth Smythe, and National

Irrigation Association head George Maxwell, the western irrigation movement gained momentum. In 1900, each major political party inserted pro-irrigation planks in their platforms, making it a national issue. The first bills introduced in Congress to establish a federal reclamation program failed. Seen primarily as a western issue, few eastern politicians showed much interest in western irrigation. But after western interests blocked a number of pet projects for eastern congressmen, western irrigation suddenly became interesting to eastern politicians.

The "reclamation" movement received a significant boost when Theodore Roosevelt became president in 1901. A strong supporter of western irrigation and a former resident of the arid western regions, Roosevelt had first-hand knowledge of the area's condition. Moving swiftly to establish a federal reclamation program in the West, Newlands re-introduced his reclamation bills. Armed with strong public support and the endorsement of the president, Newlands' bill quickly moved through Congress and was signed into law on June 17, 1902.

Terms of the Reclamation Act authorized the Secretary of the Interior to locate and construct irrigation works in 16 (later 17) western states and territories. Funds for construction of those project were to come from sale of public lands within those states and territories. The secretary was further authorized to close to settlement all lands that would be irrigable under the projects. Following completion of project facilities, these lands would be opened for settlement under provisions of various homestead laws and in tracts no larger than 160 acres to prevent speculation and encourage homesteading by individuals and families.

Soon after passage of the Reclamation Act, Secretary of the Interior Ethan Allen Hitchcock formed the Reclamation Service within the U.S. Geological Survey, appointing Frederick H.

Newell, chief of the Survey's Division of Hydrography, head of the new service. In forming the organization, Newell drew heavily from the ranks of his former division, appointing men who had previously been involved in western resource surveys.

Within a year after passage of the Reclamation Act, six projects were approved, and in August 1903, construction of the first project, the Truckee-Carson Project in Nevada, began. Over the next four years, 19 new projects were approved. In 1907, the Reclamation Service was given independent status as a bureau of the United States Department of the Interior.

The Reclamation Service soon established itself as a world leader in dam engineering and construction. In 1910, the Service completed Shoshone Dam near Cody, Wyoming. At 325 feet, it was the world's tallest dam. In 1915, Reclamation completed construction of Arrowrock Dam in Idaho, pushing the record to 350 feet. Throughout the late teens and twenties, Reclamation continued to hone its engineering skills, pioneering numerous advancements in dam design and construction. In 1932, the Bureau of Reclamation, so named in 1923, completed construction of Owyhee Dam in Oregon. Rising a record 417 feet, Owyhee Dam was the proving ground for methods and technologies developed for construction of Hoover Dam which would rise 725 feet above the Colorado River.

The construction of Hoover Dam marked the beginning of a new era in the federal reclamation program: the era of multi-purpose, water resource development with far-reaching benefits including irrigation, hydroelectric power, flood control, recreation, and fish and wildlife enhancement. Hydropower had long been a part of the Reclamation program. Generating plants on Reclamation projects provided power for pumping and other project-related uses with surplus power sold to farms and towns. While the potential for hydroelectric development at many Reclamation reservoirs was recognized, controversy over public vs. private power development hindered significant developments. Even so, by 1923, powerplants were operating on 12 Reclamation projects.

The passage of the Boulder Canyon Act in 1928, authorizing construction of Hoover Dam, placed Reclamation at the forefront of the hydroelectric industry in the west. The enormous generators turning deep inside Hoover's powerhouses

would provide only one benefit—revenue.

Revenues from the sale of electricity generated at Hoover Dam would be used to repay construction costs. Unlike previous Reclamation projects, water users did not pay for project development. Power had become the paying partner of irrigation, and federal irrigation and hydroelectric development became almost inseparable.

Construction of Hoover Dam was the beginning of large-scale, multi-purpose, water resource developments for the Bureau of Reclamation. Major projects undertaken at this time included the Colorado-Big Thompson Project and the Central Valley Project. Following on the heels of Hoover Dam, the Columbia Basin Project, with Grand Coulee Dam at its focus, emerged from the arid regions of central Washington State. Like Hoover, Grand Coulee was centered around its hydropower potential. While controversy over public vs. private power development continued, others questioned the wisdom of building the world's largest powerplants in a region relatively devoid of people and industry. Some of the power generated at Grand Coulee would be used to pump water to project lands, but markets for surplus power seemed nowhere to be found. Few could have anticipated the surge in demand for power caused by the outbreak of World War II.

When the United States entered World War II, the national industrial complex geared up to provide materials and supplies for the war effort. The western United States, with a ready supply of cheap electrical power, was one of the major beneficiaries of the industrial build-up. Throughout the war, generators at Hoover, Grand Coulee, and numerous other Reclamation power facilities, operated full-time providing power for war related industries. In addition, Reclamation facilities supplied water to grow food for domestic and overseas use. Power and water supplied by western Reclamation projects played a significant role in securing an Allied victory.

As World War II drew to a close, Reclamation officials and planners turned their attention toward the future. Following the end of World War I, returning veterans rushed to claim newly opened farm units on Reclamation projects, and Bureau officials believed the same would be true following World War II. In addition, thousands of veterans would return to a booming economy in need of employment. With this in mind, Reclamation planners readied pro-

jects for construction and prepared project lands for settlement.

A significant step in preparing for the post-war period was reorganization of the Bureau. In 1943, Reclamation announced the formation of six regions headquartered in Boise, Sacramento, Billings, Salt Lake City, Boulder City, and Amarillo. A seventh region, headquartered in Denver, was added later. The regional directors had broad administrative authority to deal with the daily operation of projects within their regional borders while maintaining close relationships with local water users. Responsibility for the technical aspect of project design and construction remained with the Chief Engineer's office in Denver while overall responsibility for Reclamation's operation came from the Commissioner's office in Washington, DC.

In the post-war era, Reclamation's construction program grew, fueled by the Pick-Sloan Missouri Basin Program—a joint program of Reclamation and the Corps of Engineers for the comprehensive development of the Missouri River Basin. The Missouri Basin Program was the largest water resource development ever envisioned and included the full spectrum of multi-purpose benefits. The Pick-Sloan Plan called for construction of more than 300 project units including over 100 dams providing 107 million acre-feet of storage, 2.6 million kilowatts of electricity, and water to irrigate more than 4,000,000 acres of land. Other benefits included navigational improvements, flood control, recreational developments, and water for municipal and industrial uses.

Between 1945 and 1960, Reclamation began construction of more than 60 projects. In addition to the Pick-Sloan Program, Reclamation initiated construction on additional units of the Central Valley Project. In the Colorado River Basin, the first units of the Colorado River Storage Project began to take shape.

By 1960, numerous forces began pressuring Reclamation, eventually resulting in a fundamental shift in Reclamation's program and mission. Budgetary cutbacks, the shift in the western economy away from agriculture, and the rise of the environmental movement, were all factors contributing to the change. Despite these forces, Reclamation accomplished some of its most notable achievements during the 1960s. In 1964, Reclamation completed Glen Canyon Dam, the key feature of the Colorado River Storage Project.

Second only to Hoover Dam as the nation's tallest concrete dam, Glen Canyon Dam looms more than 700 feet above the Colorado River standing as a monument to the struggle between western resource development and environmental protection.

The last major round of project authorizations took place in the late 1960s. The few projects authorized since then were generally extensions of existing projects or projects to improve water quality. Throughout the 1970s, the environmental movement continued to gain strength, resulting in strong opposition to western water development projects. The public's growing political awareness and the economic difficulties of the era also hindered further developments.

In the 1970s, two events took place that resulted in significant changes in the Reclamation program. In June 1976, Teton Dam, a 300-foot high earthfill dam in Idaho, failed. Although the only such occurrence in Reclamation's then 75 years of dam construction, the disaster called attention to the subject of dam safety and helped fuel opposition of water resource development projects. The second event was the release of President Jimmy Carter's "hit list" of several dozen large water projects, including several Reclamation projects, which Carter refused to fund. While Carter's list proved to be politically unpopular and many of the projects survived, it was one more manifestation of the growing opposition to large-scale water resource development projects.

The 1980s was a period of transition during which Reclamation slowly and painfully turned from being a water resource development agency to a water resource management agency with environmental protection, water conservation, and fish and wildlife enhancement given equal consideration with the needs of water users. Beginning in 1988, Reclamation began a major reorganization that significantly reduced both the budget and staff of the organization. The change was difficult, and even today a few voices of discontent can be heard in the halls of the Engineering and Research Center in Denver, renamed the Reclamation Service Center—a name that reflects the new mission of the Bureau of Reclamation:

To manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The changes at Reclamation were difficult, but Reclamation survived and will continue to play an important role in the American West of the 21st century.

Reclamation's involvement in archeology and Cultural Resources Management (CRM) began in the mid-1940s with participation in the River Basin Surveys Program. The establishment of the basin surveys was in response to the Pick-Sloan Missouri Basin Program. A group of prominent archeologists, concerned about potential destruction of archeological resources in the Missouri Basin, formed a committee to lobby for establishment of a federal salvage archeology program. The group sought and received support and sponsorship for the program from the Smithsonian Institution.

All of the agencies involved in development of the Missouri River Basin were aware of the potential threat to archeological sites, but only the National Park Service had any responsibility for protection of archeological data, and recovery of that data was outside the agency's mission. The Park Service agreed to conduct recreational surveys of reservoir sites in the Missouri River Basin, and assessment of archeological and historic resources was part of those surveys. In 1945, the Park Service and Smithsonian signed a memorandum of understanding whereby the Park Service would provide the Smithsonian with survey results. The Smithsonian would then analyze the reports and provide the Park Service with plans and budgets for any proposed work. Funds for salvage operations were provided by Reclamation and the Corps of Engineers, and work was carried out by the Smithsonian. The River Basin Surveys Program was headed by noted archeologist Frank H. H. Roberts. Although created in response to the pending development of the Missouri Basin, the River Basin Surveys Program conducted work in numerous river basins.

In 1960, Congress began passing legislation that would establish a legal obligation for agencies to develop CRM programs. The Reservoir Salvage Act of 1960 required any federal agencies involved in reservoir construction to notify the Secretary of the Interior of potential harm to archeological or historic sites. In 1974, the Archaeological and Historic Preservation Act extended those provisions to include all federal or federally-sponsored construction activities.

In 1966, Congress passed the National Historic Preservation Act (NHPA) which requires

federal agencies to consider the effects of any federal undertakings on historic resources. In 1971, President Richard Nixon issued Executive Order 11593 calling for protection and enhancement of the cultural environment. In 1980, amendments to the NHPA codified sections of Executive Order 11593, and required inventories of cultural resources on federal lands. The amendments also required agencies to develop programs to protect historic and cultural resources under their control.

In 1974, the Bureau of Reclamation hired its first archeologist, Dr. Ward Weakley. As responsibility for protection of cultural resources under their control grew, so too did Reclamation's CRM staff. Soon, CRM personnel were employed in many of Reclamation's regional and area offices.

Today, Reclamation's archeologists and historians work to identify, evaluate, and preserve cultural resources located on lands administered by the agency. In addition Reclamation's CRM personnel play an important role in management of those lands by participating in development of land use plans. Reclamation CRM personnel work closely with state officials, other federal agencies, and tribal representatives to provide assistance and guidance in management of cultural properties. Recent passage of the Native American Graves Protection and Repatriation Act has increased Reclamation's responsibilities, and Reclamation CRM personnel are working closely with tribal representatives and federal officials to fulfill those responsibilities.

Reclamation's CRM program is also dedicated to the preservation of archeological and historic resources located throughout the West, not just on federally-administered lands. Reclamation CRM personnel actively participate in programs to promote public education and awareness of the importance that cultural resources play in understanding our past. Through their participation in public education programs, sponsorship of archeological and cultural resource activities, and their continuing efforts to protect and preserve the evidence of past human activities, Reclamation's CRM personnel have shown their dedication to the preservation of the past for the benefit of future generations.

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